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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/586,534

Applicant(s)

NOMURA, TAKASHI

Examiner

YU ZHAO

Art Unit

2169

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date April 18, 2011.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Acknowledgment is made of applicant's amendment filed on **May 18, 2011**.

Claims 1-13 are presented for examination.

Claims 1-4, 8 and 13 are amended.

Claim Objection is withdrawn in light of amendment by the applicant(s).

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on **April 18, 2011** is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Argument

3. Applicant's arguments filed in the amendment filed on **May 18, 2011** have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that, "The Office Action states that the claims do not explicitly recite that the update substance data have an index that is not a tree index. To improve clarity, the Applicant is amending independent claim 1 to recite, inter alia, that the update substance data have a non-tree index as a search key that does not require any search tree data. Support for this amendment can be found at least in FIG. 4 and paragraphs [0032]-[0033] of the specification. The Applicant is also amending independent claims 3 and 13 in a similar manner. These amendments are not substantive, and do not change the scope or meaning of the claims. During

the interview of May 17, 2011, Examiners Zhao and Betit agreed to withdraw the rejections of claims I, 3, and 13 in view of this amendment. Examiners Zhao and Betit also agreed that the next Office Action issued would be non-final."

Examiner has further looked into the specification and the amendment (filed on 5/18/2011), and determined the amended filed did change the scope or meaning of the claims.

1. In the current amendment (filed on 5/18/2011), claim 1, "...wherein the update substance data are stored in a **non-tree structure**, have **an index** as a search key..." has been removed to broaden the breadth of the claim limitations. The structure of "update substance data" is no longer limited to the specific data structure (e.g. non-tree structure).

2. In the current amendment (filed on 5/18/2011), claim 1 has added new limitation "...the update substance-data...have a **non-tree index** as a search key..." which is narrowing "an index" (in the removed claim limitation) from non-specific index structure to a specific index structure (e.g. "non-tree index.")

Although both limitations disclose the term "non-tree," the removed limitation is being specific on the structure of the data records, where the newly added limitation is being specific on the structure of the index of the data records.

As a result of the current amendment, the removed limitation has broadened the structure of the data records from a specific data structure to any structure of the data, and the newly added limitation has narrowed the structure of the index of the data from non-specific index structure to a specific index structure (e.g. non-tree index).

The scope or meaning of the claims is changed.

3. "update substance-data" has a "non-tree index" is not supported by the specification.

Examiner has tried to find the support for the newly added limitation, "the update substance data have a non-tree index..." However, examiner could not find any support in the specification for the newly added limitation. "Non-tree index" is a negative limitation where the specification needs to explicitly disclose it.

Applicant has stated that paragraphs [0032]-[0033] support the newly added limitation.

Specification, paragraph [0032], recites "FIG. 4 shows **the data format (structure) of update data** transmitted by the server 6 to the navigation apparatus 1 to be used to update search data... Each set of update data includes information indicating **an index 31**, a category 32, a substance data name 33, a substance data position 34 and a version 35."

a. The paragraph merely discloses "update data" is stored in a "non-tree" structure (e.g. linear or sequentially, such as table with rows and column/field). It does not disclose "update data" has a "non-tree index."

Just for the sake of argument, index is used to find the data (e.g. records) that is stored on the storage device, regardless what structure the data is stored with. The structure of the index of the records and the structure of the actual record can have different structures. For example, a collection of records is organized in a

sequential/linear structure (e.g. a table with X number of rows) and have a tree index, which point to each row.

b. It merely discloses "**an index**." It does not explicitly disclose "index" of "update data" is "non-tree index."

c. The term "**an index**" is disclosed in the paragraph, it merely discloses it is "an index." The paragraph does not disclose whether "an index" is tree index or non-tree index. Just for the sake of argument, although, the term "index" is disclosed in the paragraph, it has totally different meaning than search index. The above cited paragraph discloses that "update data" is merely a record, which has number of fields where each field has a field name. One of the field names is called "index." This "index" is only named as "index." It can be name in other terms, such as ID. On the contrary, a search index is an ordered reference list (i.e. contains unique search key of each record) which identifies the locations of records.

Specification, paragraph [0033], recites "**Update data**, however, are generated in correspondence to each set of substance data by **adding an index** to be used as a search key to the substance data. If there is a single set of substance data to be updated, one set of update data formatted as shown in FIG. 4 is transmitted...In other words, the update data are not transmitted in a format that will include **a search tree** and substance data..."

a. The cited paragraph merely discloses "an index." It does not disclose whether, "an index" is tree index or non-tree index.

b. The cited phrase, "In other words, the update data are not transmitted in a format that will include a search tree and substance data..." is further discloses that "a search tree" is not included and transmitted. It does not disclose whether "tree index" or "non-tree index" is included or not. Further, it does not clearly disclose whether "an index" is referring to "non-tree index" or "tree index."

c. Paragraph [0033] merely recites, "update data" is a record, which has number of fields. One of the field names is called "index." (e.g. ID or SSN), when a search index is created, "index" field of each record, will be used as search key and will be used later to create a searchable index. However, it does not clearly disclose this searchable index is tree index or non-tree index.

Applicant argues that, "In addition, the Applicant submits that Miyahara fails to remedy the deficient teachings of Tanaka. Miyahara merely discloses that map data includes a group of layers, each of which is divided into blocks (§ [0081]). To update the map data, individual layers or blocks may be replaced with new data (§ [0083]). Therefore, Miyahara does not teach or suggest providing initial search data and update search data separately, as recited in claim 1. Further, as the Office Action acknowledges, Miyahara fails to teach or suggest executing "a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the index of the update substance data," as recited in claim 1."

Examiner respectfully disagrees. Tanaka et al. (US 2002/0013658), page 2, paragraph [0039], discloses "...The control unit 8 retrieves the name and data of the

registered location at step 301 in the similar manner as at step 101 (FIG. 3). The control unit 8 then **forms a new search list** at step 302 to add the name of the memory location **separately from the original search list...**" paragraph [0040], "...The control unit 8 retrieves the input location name at step 401 in the similar manner as at step 201 (FIG. 5), and **searches for the target location** from the input location name at step 402 by **using both** the original (normal) search list and the new search list..." The above cited paragraphs from Tanaka show that the control unit searches both original search list and new search list.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claims 1, 3 and 13** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites: "...the update substance-data...have a non-tree index as a search key..." However, examiner is unable to find support for the above limitation in the Specification.

Claims 3 and 13 are rejected as substantially similar as claim 1, for the similar reasons.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-5, 9, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (U.S. Pub. No.: US 2002/0013658 A1, hereinafter, Tanaka), in view of Cheng et al. (U.S. Pub. No.: US 5,204,958 A1, hereinafter Cheng) and further in view of Umezu et al. (U.S. Patent No.: US 6,980,907, hereinafter Umezu), and further in view of Lomet (U.S. Patent No.: 4,611,272).**

Claim 1 is rejected as substantially similar as claim 3, for the similar reasons.

For claim 3, Tanaka discloses a search data update system, comprising:

a navigation apparatus that uses search data (Tanaka: paragraph [0007], "to provide a navigation system, in which registered locations input by users can be made a subject of an alphabet-based search", paragraph [0008], "to provide a navigation system, in which registered locations input by users can be made a subject of a facility search or a surroundings search based on a facility type-based search."); **and**

a search data providing apparatus that provides update search data to the navigation apparatus to be used to update initial search data (Tanaka: page 2, paragraph [0035]), **wherein:**

the navigation apparatus includes a storage device at which the initial search data constituted with search tree data having a tree structure and a plurality of sets of initial substance data each specified based upon the search tree data are stored, and an update data obtaining device that obtains the update search data from the search data providing apparatus, wherein the initial substance data include facility information (Tanaka: page 1, paragraph [0003], "In a navigation system...location names of various facilities are preliminarily stored as a search list and a target location is searched from an input location name by the use of the search list. This search is conducted alphabetically in Japanese 50-alphabet system...", paragraph [0009], "...has a rewritable memory which originally stores data of a plurality of locations...the navigation system registers and stores data of the new location in the *rewritable memory* in addition to the data of the plurality of locations...", page 2, paragraph [0029], "...retrieving the map data from a *map data memory medium*...", paragraph [0032], "...For registering the new location...This specified location is registered as a *memory location*...", paragraph [0038], "a *memory location* is registered in a search list separate from an original search list, which pre-stores names of locations such as facilities, in place of updating an original search list (first embodiment)");

the update search data are provided in units of individual sets of update substance data, wherein the update substance data are provided without any search tree data include attached thereto a non-tree index as a search key information to be used without any search tree data in a search in correspondence to each set of update substance data, and include facility information (Tanaka: page 2, paragraph [0032], "A new location is registered ...This specified location is registered as a memory location." paragraph [0038], "a *memory location* is registered in a search list separate from an original search list, which pre-stores names of locations such as facilities, in place of updating an original search list (first embodiment)", page 3, paragraph [0047], "retrieves at step 501 the data of name, area and facility type of the new location specified by the user as well as the location data such a coordinate specified by the cursor. The control unit 8 then updates the search list a step 502 with those new retrieved data.", page 3, paragraph [0044], "The surrounding location may be limited to be within a fixed radius from the specified location.", .", page 2, paragraph [0039], "...the control unit 8 then forms a new search list...**separately** from the original search list");

upon obtaining the update search data from the search data providing apparatus, the update data obtaining device stores the obtained update search data into the storage device separately from the initial search data (Tanaka: page

1, paragraph [0009], "a navigation system has a rewritable memory which originally stores data of a plurality of locations. When a user inputs a new location other than the plurality of locations, the navigation system registers and stores data of the new location in the rewritable memory in addition to the data of the plurality of locations.", page 2, paragraphs [0033]-[0040].
"...The control unit 8 retrieves the name and data of the registered location at step 301 in the similar manner as at step 101 (FIG. 3). The control unit 8 then forms a new search list at step 302 to add the name of the memory location separately from the original search list. Specifically, as shown in FIG. 7B, a new search tree is formed in the new search list in addition to the original search tree shown in FIG. 7A, when "A RA KI SA N TA KU" in Japanese (Mr. Araki's home in English) is registered as the name of the memory location..."); and

the navigation apparatus further includes a search device that executes a substance data search by using both the search tree data the initial search data stored in the storage device to execute a tree-based search and using the non-tree index attached to each set of update substance data of the update search data stored in the storage device to conduct an index-based search, in correspondence to input of a character for search (Tanaka: page 1, paragraph [0009], page 2, paragraph [0032], "A new location is registered by the

control unit 8 as shown in FIG. 3. For registering the new location", paragraph [0033], "The control unit 8 retrieves the name and data of the registered location at step 101." page 2, paragraphs [0033]-[0040], (note: "information to be used" can be broadly interpreted as ANY information and data: e.g. search tree data)).

However, Tanaka does not explicitly disclose the update search data are provided in units of individual sets of update substance data, wherein the update substance data are provided without any search tree data include attached thereto a non-tree index as a search key information to be used without any search tree data.

the update data obtaining device stores the obtained update search data into the storage device separately from the initial search data,

and using the non-tree index attached to each set of update substance data of the update search data stored in the storage device to conduct an index-based search, in correspondence to input of a character for search.

Cheng discloses the update search data are provided in units of individual sets of update substance data, wherein the update substance data are provided without any search tree data include attached thereto a non-tree index as a search key information to be used without any search tree data (Cheng: column 4, lines 46-52, "...A key value is the value being used to index a set of records, and is typically a combination of the first couple of fields in the record.", column 6, lines 48-59, "...Whenever a new data

record is received, it is stored in secondary memory in the sequential data file 130 (step 300). This is called a "sequential" data file because new records are always written to the end of the file in a temporal order, regardless of their index value..." where "update substance data" is read on "new data record," where "without any search tree data" is read on "sequential" column 6, line 60-68, "After a number of records are stored in secondary memory file 130, a block of these records are read, and corresponding indexed pointer are created and temporarily stored in primary memory in the index file 148 (step 302), herein called the small B-tree (SBT) 148..." which indicate, the record itself does not include any search tree data or tree index, the system create a new tree after the records has been received.),

and using the non-tree index attached to each set of update substance data of the update search data stored in the storage device to conduct an index-based search, in correspondence to input of a character for search (Cheng: column 4, lines 46-52, "...A key value is the value being used to index a set of records, and is typically a combination of the first couple of fields in the record." where "non-tree index" is broadly interpreted as "key value," because at this moment, the tree index has not been created yet, column 6, lines 48-59, column 6, line 60-68, "After a number of records are stored in secondary memory file 130, a block of these records are read, and corresponding indexed pointer are created and temporarily

stored in primary memory in the index file 148 (step 302), herein called the small B-tree (SBT) 148..." column 10, lines 9-21, "Whenever any type of matching operation is performed on the database, typically to read a specified set of records, the system must perform a matching range search of both the SBT 148 (and SBT 150 if two SBT's are being used) and the LBT 132...the indexed search is complete if it located the desired value in the SBT 148. In cases where the most frequent searches are to recently inserted records, this will mean that the memory resident B-tree SBT 148 fulfills a valuable buffering function.")

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon "Navigation system and method capable of registering new locations" as taught by Tanaka by implementing "System and method for efficiently indexing and storing a large database with high data insertion frequency" as taught by Cheng, because it would provide Tanaka, Tanaka's system with the enhanced capability of "The SBT 150 is a B-tree, much like the one shown in FIG. 2. Since the indexed pointers for new records are stored in primary memory, the generation and storage of such indexed pointers is very fast, and incurs no costs with respect to usage of secondary memory." (Cheng: column 7, lines 1-6).

However, Tanaka and Cheng do not explicitly disclose the update data obtaining device stores the obtained update search data into the storage device separately from the initial search data.

Umezu discloses the update data obtaining device stores the obtained update search data into the storage device separately from the initial search data (Umezu: column 5, line 55 – column 6, line 2 “...and differential update data for carrying out the update in accordance with the difference between the old version and latest version of the map data...FIG. 8 is a diagram illustrating a format of the differential update data. Just as the map data, the differential update data consists of files, each of which includes one type of data. Each file contains header information and a plurality of update data #0-#n.” where “update substance data” is broadly interpreted as “differential update data”),

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon “Navigation system and method capable of registering new locations” as taught by Tanaka by implementing “Map data processing unit” as taught by Umezu, because it would provide Tanaka, and Cheng’s modified system with the enhanced capability of “a batch update section for collectively updating all the map data to the latest version map data in accordance with the update data fed from the update data input section; a dynamic update section for updating the

map data to the latest version map data in accordance with the update data fed from the update data input section every time the map data becomes necessary; an update method selecting section for selecting one of the batch update section and dynamic update section in response to the update data; and a map data" (Umezu: column 1, lines 56-67) and "...the map data processing unit can switch the update method between the batch update and the dynamic update in response to the update data. As a result, it offers an advantage of being able to perform the update to the latest version map data without affecting the operation speed of the navigation, with minimizing the time of precluding the use of the navigation." (Umezu: column 2, lines 1-7).

However, Tanaka, Cheng and Umeze do not explicitly disclose the update substance data have a non-tree index.

Lomet discloses the update substance data have a non-tree index (Lomet: column 13, lines 26-34, "...If these lists are very short, a sequential search should be adequate. Should the lists be somewhat longer, a binary digital tree (trie) can be used to locate the buddy. In either case, the technique needed is straightforward. The detailed algorithms and data representations required are well known.").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon "Navigation system and method capable of registering new locations" as taught by Tanaka by implementing "Key-accessed file organization" as taught by Lomet, because it would provide Tanaka Cheng and Umeze's modified system with the enhanced capability of "If these lists are very short, a sequential search should be adequate." (Lomet: column 13, lines 26-34)

Claim 13 is rejected as substantially similar as claim 3, for the similar reasons.

For claim 2, Tanaka discloses an modified update method performed by a server and a control device of a navigation apparatus for updating search data used in a navigation apparatus according to claim 1, further comprising:

storing, by the control devices, the second substance data having the non-tree index as the update data in the navigation apparatus separately from the initial search data (Tanaka: page 1, paragraph [0009], "...originally stores data of a plurality of locations. When a user inputs a new location other than the plurality of locations, the navigation system registers and stores data of the new location in the rewritable memory in addition to the data of the plurality of locations...", page 3, paragraph [0047], "retrieves at step 501 the data of name, area and facility type of the new location specified by the user as well as the location data such a coordinate specified by the

cursor. The control unit 8 then updates the search list a step 502 with those new retrieved data.”, page 2, paragraphs [0033]-[0040]).

For claim 4, Tanaka discloses a modified search data update system according to claim 3, wherein:

upon obtaining new update search data, the update data obtaining device in the navigation apparatus sorts entire update search data including the new update search data and the update search data already stored in the storage device based upon the non-tree index to be used in a search and stores the sorted update search data in the storage device (Tanaka: page 1, paragraphs [0009], [0010], page 2, paragraph [0031], “...search list is stored in the form of search tree so that the target location is searched for in the Japanese alphabetical order...”, paragraph [0035], “searches for the target location from the input location name at step 202 by using the *updated search list*.”, paragraph [0039], where “second storage device” is read on “rewritable memory”).

For claim 5, Tanaka discloses a modified search data update system according to claim 3 wherein:

the navigation apparatus further includes a control device that executes navigation processing including route search and route guidance by using the initial or update substance data obtained via the search device (Tanaka: page 1, paragraphs [0003], [0004], page 2, paragraph [0030]).

For claim 9, Tanaka discloses a modified search data update system according to claim 3, wherein:

the update data obtaining device in the navigation apparatus transmits to the search data providing apparatus information indicating a range of search data to be updated; and if update search data are available over the range of search data to be updated indicated in the received information, the search data providing apparatus provides the update search data over the range to the navigation apparatus (Tanaka: page 3, paragraph [0044], "The surrounding location may be limited to be within a fixed radius from the specified location.", where "may be limited" indicates it can update over a fixed radius, page 2, paragraph [0032], page 3, paragraphs [0045]- [0047]).

For claim 11, Tanaka discloses a modified navigation apparatus in a search data update system according to claim 3 (Tanaka: page 1, paragraph [0007], page 2, paragraphs [0029]-[0030]).

For claim 12, Tanaka discloses a modified search data providing apparatus in a search data update system according to claim 3 (Tanaka: page 2, paragraphs [0029]-[0030]).

7. **Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (U.S. Pub. No.: US 2002/0013658 A1, hereinafter, Tanaka), in view of Cheng et al. (U.S. Pub. No.: US 5,204,958 A1, hereinafter Cheng) and further in view of Umezu et al. (U.S. Patent No.: US 6,980,907, hereinafter Umezu), and**

further in view of Lomet (U.S. Patent No.: 4,611,272) and further in view of Miyahara (U.S. Pub. No.: U.S. 2003/0028316).

For claim 10, Tanaka discloses a modified search data update system according to claim 3.

However, Tanaka does not explicitly disclose wherein: the update data obtaining device in the navigation apparatus transmits to the search data providing apparatus information related to a version of the update data stored in the second storage device; and if a newer version of update substance data than the version indicated in the received information is available, the search data providing apparatus provides the update search data corresponding to the newer version of the update substance data to the navigation apparatus.

Miyahara discloses wherein: the update data obtaining device in the navigation apparatus transmits to the search data providing apparatus information related to a version of the update data stored in the second storage device (Miyahara: page 6, paragraphs [0096] and [0097]); and if a newer version of update substance data than the version indicated in the received information is available, the search data providing apparatus provides the update search data corresponding to the newer version of the update substance data to the navigation apparatus (Miyahara: page 6, paragraphs [0096]-[0098]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon "Navigation system and method capable of registering new locations" as taught by Tanaka by implementing

"Satellite navigation system of which map data are partially updateable" as taught by Miyahara, because it would provide Tanaka's system with the enhanced capability of "to greatly reduce an amount of data to be re-loaded when map data is updated." (Miyahara: page 1, paragraph [0010]).

8. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (U.S. Pub. No.: US 2002/0013658 A1, hereinafter, Tanaka), in view of Cheng et al. (U.S. Pub. No.: US 5,204,958 A1, hereinafter Cheng) and further in view of Umezu et al. (U.S. Patent No.: US 6,980,907, hereinafter Umezu), and further in view of Lomet (U.S. Patent No.: 4,611,272) and further in view of Miyahara (U.S. Pub. No.: U.S. 2003/0028316), and further in view of Saito et al. (U.S. Pub. No.: US 2003/0140309 A1, hereinafter, Saito).

For claim 6, Tanaka discloses a modified search data update system according to any claim 3.

However, Tanaka does not explicitly disclose wherein: once a number of sets of update search data having been obtained becomes equal to or greater than a predetermined value, the update data obtaining device in the navigation apparatus provides an audio output or a display output notifying that the number of sets of update search data is equal to or greater than the predetermined value.

Miyahara discloses wherein: once a number of sets of update search data having been obtained becomes equal to or greater than a predetermined value, the update search data obtaining device in the navigation apparatus that the

number of sets of update data is equal to or greater than the predetermined value
(Miyahara: page 6, paragraphs [0096]-[0098]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon "Navigation system and method capable of registering new locations" as taught by Tanaka by implementing "Satellite navigation system of which map data are partially updateable" as taught by Miyahara, because it would provide Tanaka's modified system with the enhanced capability of "to greatly reduce an amount of data to be re-loaded when map data is updated." (Miyahara: page 1, paragraph [0010]).

However, Tanaka, Cheng and Umezu do not explicitly disclose providing an audio output or a display output notifying that the number of sets of update data is equal to or greater than the predetermined value.

Saito discloses providing an audio output or a display output notifying
(Saito: pages 11-12, paragraph [0203]-[0206]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon "Navigation system and method capable of registering new locations" as taught by Tanaka by implementing "Information processing apparatus, information processing method, storage medium, and program" as taught by Saito, because it would provide Tanaka's modified system with the enhanced capability of "for the user to

update the database at any time desired.” (Saito: page 11, paragraph [0201]).

Claim 7 is rejected as substantially similar as claim 6, for the similar reasons.

Further, Tanaka discloses obtains a new version of initial search data comprising new search tree data and a new plurality of sets of initial substance data containing update substance data in the update search data search specified based upon the new search tree data and stores the new version of initial search data thus obtained into the storage device. (Tanaka: Fig. 4).

9. **Claims 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (U.S. Pub. No.: US 2002/0013658 A1, hereinafter, Tanaka), in view of Cheng et al. (U.S. Pub. No.: US 5,204,958 A1, hereinafter Cheng) and further in view of Umezu et al. (U.S. Patent No.: US 6,980,907, hereinafter Umezu), and further in view of Lomet (U.S. Patent No.: 4,611,272), and further in view of Hanon et al. (U.S. Pub. No.: US 2003/0231163, hereinafter, Hanon).**

For claim 8, Tanaka discloses a modified search data update system according to claim 5.

However, Tanaka does not explicitly disclose wherein: the navigation apparatus further includes an input device with which a search key can be entered one character at a time, wherein: in correspondence to each character entered via the input device, the search device advances a search executed by using the search tree data, compares the character with the non-tree index, which is contained in each of a plurality of sets of update search data stored in the storage device, and adds a non-target flag to each set

of update search data which has been determined not to be a search target based upon comparison results, wherein the non-target flag indicates that each set of update search data that includes the non-target flag is not to be compared afterwards in a subsequent index-based search.

Hanon discloses wherein: the navigation apparatus further includes an input device with which a search key can be entered one character at a time, wherein: in correspondence to each character entered via the input device, the search device advances a search executed by using the search tree data, compares the character with the non-tree index, which is contained in each of a plurality of sets of update search data stored in the storage device, and adds a non-target flag to each set of update search data which has been determined not to be a search target based upon comparison results, wherein the non-target flag indicates that each set of update search data that includes the non-target flag is not to be compared afterwards in a subsequent index-based search (Hanon: pages 8-9, paragraph [0106] and [0109]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon "Navigation system and method capable of registering new locations" as taught by Tanaka by implementing "Interface for a multifunctional system" as taught by Hanon, because it would provide Tanaka's modified system with the enhanced capability of "attempts to complete the city or state name based on the letters input by the user." (Hanon: page 8, paragraph [0109]).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YU ZHAO whose telephone number is (571)270-3427. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mahmoudi, Tony can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-270-4427.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Date: 7/27/2011

/Yu Zhao/

Examiner, Art Unit 2169

/Tony Mahmoudi/

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